

The When and Whys of Planning for Long-term Stewardship

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Presentation Objectives

- What is cleanup?
- What is long-term stewardship?
- Examples of stewardship activities
- Why is there a need for long-term stewardship?
- Specific end state of a site
- When does long-term stewardship begin?
- Land use and community involvement in long-term stewardship planning
- Why address long-term stewardship planning now?

What is Cleanup?

- “Cleanup” at DOE sites doesn’t imply that all hazards will be removed from a site
- “Cleanup” refers to the process of addressing contaminated land, facilities and materials in accordance with applicable requirements
- “Cleanup” includes activities such as:
 - groundwater treatment
 - decontamination and decommissioning of facilities
 - excavation or capping of contaminated soils or sludges
 - removal, treatment and/or disposal of wastes on-site or off-site

What is Long-term Stewardship?

- Long-term stewardship refers to all activities necessary to ensure protection of human health and the environment following completion of cleanup, disposal, or stabilization at a site or portion of a site
- Stewardship activities entail ongoing, periodic if not continuous, actions by people.
- These people may be representatives of government agencies, Native American groups, private businesses, non-governmental organizations and stakeholders
- Issues with stewardship include not only **what** will be done, but **how** and **when** it will be accomplished, and by **whom**.
- Stewardship activities should be conducted for as long as the residual contaminants remain hazardous.

What is Long-term Stewardship?

Stewardship Activities

- Surveillance, groundwater monitoring, pump and treat, cap repair, maintenance of entombed buildings, barriers and containment structures
- Institutional controls (generally, use and access restrictions)
- Oversight and enforcement (if necessary) of stewardship activities
- Gathering, storing, and retrieving information about residual contaminants and conditions on site, as well as about changing off-site conditions that may affect or be affected by residual contaminants

What is Long-term Stewardship?

Stewardship Activities (continued)

- Disseminating information about the site and related use restrictions
- Periodically reevaluating how well the total protective system is working
- Evaluating new technological options to reduce or eliminate residual contaminants or to monitor and prevent migration of isolated contaminants
- Supporting research and development aimed at improving basic understanding of both the physical and sociopolitical character of site environments and the fate, transport, and effects of residual site contaminants

Why is there a need for Long-term Stewardship?

- Long-term stewardship reflects an inability to fully remediate, at a reasonable cost, all contamination occurring as a result of operations usually occurring years ago
- DOE has been, and intends to continue, performing waste cleanup to standards that do not allow for unrestrictive land use in most cases
- Even if unrestricted land use were to be sought, it is often technically and economically infeasible
- Consequently, long-term stewardship will be required for many years into the future

Specific End State for a Site

- Decisions regarding what to do with contaminated soils or facilities, and the subsequent cleanup actions taken, will result in a specific end state for a site
- For some sites (e.g., those with disposal cells), the continued monitoring of contained contamination will represent the final end state, where no additional work is anticipated unless an unexpected condition occurs (e.g., remedy fails)
- For other sites (e.g., sites with entombed reactors, containment systems), the long-term stewardship phase represents a point where hazards are controlled, yet additional work may be required
- For these sites, long-term stewardship may represent an “interim” phase until new technologies become available or existing technologies can be deployed at a more reasonable cost

When Does Long-term Stewardship Begin?

- Long-term stewardship generally begins when active cleanup, stabilization, or disposal has been completed in accordance with an applicable regulatory requirement or management plan
- In some cases, particularly at large and complex sites, the cleanup plan addresses an entire geographic site
- In other cases, long-term stewardship may occur at a portion of a site long before cleanup of the entire site is complete

Land Use in LTS Planning

Community Involvement (a)

- EPA believes in early community involvement, with a focus on the community's desired future land use(s)
- Early community involvement should result in:
 - a more democratic decision making process
 - greater community support for remedies selected
 - expedited and cost-effective cleanups
- Discussions with stakeholders, local land use planning authorities, appropriate officials, as appropriate, should be conducted as early as possible

Land Use in LTS Planning

Community Involvement (b)

- If the site is located in a community likely to have environmental justice concerns, extra efforts should be made to reach out to and consult with those segments of the community
- Remedial action objectives should reflect the reasonably anticipated future land use(s)
- Future land use assumptions allow for the development of practicable and cost effective remedial alternatives

Land Use in LTS Planning

Community Involvement (c)

- Achieving either the reasonably anticipated land use, or the land use preferred by the community, may not be practicable across an entire site.
- Remedial action objectives may then be revised to accommodate different, more reasonable land use(s)
- If the reasonably anticipated future land use is highly uncertain, a range of likely future land uses should be considered
- The remedy selection process would then determine which remedy is most appropriate and the land use(s) available following remediation

Why Address Long-Term Stewardship Now?

- To ensure that the long-term stewardship technical requirements and costs are considered during the cleanup process
- To provide for smooth transition from cleanup to long-term stewardship through technical, financial, and managerial planning
- To emphasize that the “cleanup” goal, in many cases, is to reduce and control, versus eliminate, risk and cost
- To set realistic expectations and show interim successes

Why Address Long-Term Stewardship Now? *(continued)*

- To ensure that stakeholders have a clear understanding of what the cleanup mission will “produce” and clarify that there is an attainable end-point
- To identify technology research and development needs
- To assure stakeholders that DOE will not walk away from its enduring obligations
- All sites where EM is landlord must prepare an LTS plan for incorporation into each geographic site’s Project Baseline Summary by FY 2004 or sooner when practicable

When and Why of LTS Planning

- Stewardship of radioactive materials and contaminated facilities will be a continuing responsibility of Government
- Stewardship opportunities and obligations should be incorporated into decisions from the outset so that future costs, risks, and information requirements can be taken into account properly in deciding what is to be done
- While materials may be hazardous “forever,” decisions about them need not be
- Stewardship responsibilities will “rollover” to succeeding generations, which can and should be empowered to make such decisions anew

Further Reading

- Report to Congress on Long-Term Stewardship (DOE/EM-0563), January 2001
(<http://lts.apps.em.doe.gov/center/ndaareport.html>)
- Long-Term Stewardship Study (Draft), DOE/EM/LTS, October 2000
(<http://lts.apps.em.doe.gov/center/reports/pdf/DraftStudy.pdf>)
- Long-Term Institutional Management of U.S. Department of Energy Legacy Waste Sites, National Research Council, August 2000 (<http://books.nap.edu/catalog/9949.html>)
- Land Use in the CERCLA Remedy Selection Process (OSWER Directive No. 9355.7-04), U.S. EPA, May 1995
(<http://www.epa.gov/oerrpage/superfund/resources/landuse.htm>)
- LTS Annotated Bibliography of the National Governors Association Federal Facilities Task Force
(<http://ndep.state.nv.us/lts/biblio.htm>)



End of Presentation